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IN THE SPECIFICATION:

[0028] (Currently amended) It is highly desirable that the field of regard for the controllable light reflector 72 be greater than 45 degrees half angle, or 90 degrees total, so that there is a reflected light beam back to the light transceiver 42 at even higher angles relative to the normal axis 82. To achieve this greater field of regard, a field-of-regard broadening structure may be positioned overlying the controllable light reflector 72. In the preferred embodiment of this approach, a volume hologram 88 is positioned overlying the controllable light reflector 72, as shown in Figure 4. The volume hologram 88 bends light rays toward the normal from the incident angle and back to the source along the same angle as the incident angle, as indicated by entry ray path 90, interior ray path 92, and exit ray path 94 in Figure 4. See the discussion in H. Kogelnik, "Couple-Wave Theory for Thick Hologram Gratings", Bell Sys. Tech. J., page 2909-2947 (1969). Even more preferably at least preferably, at least two volume holograms 88 are positioned overlying the controllable light reflector 72, also as shown in Figure 4. The volume holograms 88 may be positioned in a side-by-side relation, or in a superimposed, overlying relation, both of which are illustrated in Figure 4. ("Side-by-side" means that a single light ray does not pass through the volume holograms in the side-by-side relation. "Superimposed" means that a single light ray does pass through all of the volume holograms that are in the superimposed relation.) When there is incident light in the sensitivity range of the volume hologram 88, it is bent toward the normal direction. When there is no incident light in the sensitivity range of the volume hologram, it acts as a fully transparent window so that other overlying or underlying volume holograms 88 may come into play. By using a set of side-by-side or superimposed volume holograms 88, the field of regard may be extended to nearly 180 degrees (90 degrees half angle), but is typically limited to a maximum of about 160 degrees (80 degrees half angle) for practical applications. That is, if the light transceiver 42 is anywhere within 80 degrees of the normal axis 82 of the controllable light reflector 72, its output light beam 48 is reflected back as the input light beam 52

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under the proper modulation conditions. Figures 5-7 illustrate some examples of volume holograms 88 having a cylindrical optical power (Figure 5), a Fresnel Zone plate pattern (Figure 6), and a linear grating pattern (Figure 7), respectively. Other field-of-regard broadening structures may be used instead of the volume hologram. For example, other types of holograms may be used, but with a reduced light-collecting efficiency. Other field-of-regard broadening optical devices such as a lens system, an example being a fisheye lens, could be used, but are not practical for most applications because of their bulk.